DOCUMENT RESUME

ED 405 401 UD 031 411

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TITLE Difference in the Motivational Beliefs of Asian American and Non-Asian Students.
PUB DATE Apr 96
NOTE 28p.; Paper presented at the Annual Meeting of the American Educational Research Association (New York, NY, April 8-12, 1996).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Academic Achievement; *Asian Americans; Behavior Patterns; *Beliefs; Cultural Differences; Ethnic Groups; Grade 9; High Schools; *High School Students; *Self Efficacy; Student Attitudes; *Student Motivation; White Students
IDENTIFIERS *Asian American Students

ABSTRACT

This investigation explored the differences in the motivational beliefs of ninth-grade Asian American and non-Asian students. Participants were 154 Asian Americans of various ethnicities and 372 non-Asians. Student beliefs about achievement were explored through a questionnaire developed for the study. The statistical findings suggest that the differences in type of beliefs between the two groups may help to explain their achievement behavior. More specifically, Asian American students' fear of the negative consequences of academic failure best explained their performance on the achievement task, while fear of failure least explained the non-Asian students' performance. Asian American students reported significantly lower levels of situational self-efficacy beliefs than did their non-Asian counterparts. However, Asian students outperformed non-Asian students on the achievement task. The cultural belief, fear of academic failure, better explained achievement motivation for Asian Americans than did self-efficacy beliefs. A major implication of this investigation is that more attention should be given to how motivational beliefs elicit different responses in different cultural/ethnic groups. (Contains 5 tables and 85 references.) (Author/SLD)

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ED 405 401

Difference in the Motivational Beliefs of Asian American and Non-Asian Students

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UD031411

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Abstract

The investigation explored the differences in the motivational beliefs of ninth-grade Asian American and non-Asian students. The statistical findings suggested that the differences in type of beliefs between the two groups may help to explain their achievement behavior. More specifically, Asian American students' fear of the negative consequence of academic failure best explained their performance on the achievement task while fear of failure least explained the non-Asian students' performance. Asian American students reported significantly lower levels of situational self-efficacy beliefs than did their non-Asian counterparts. However, Asian students outperformed non-Asian students on the achievement task. The cultural belief, fear of academic failure, better explained achievement motivation for Asian Americans than did self-efficacy beliefs. A major implication of this investigation is that more attention should be given to how motivational beliefs elicit different responses in different cultural/ethnic groups.

Differences in the Motivational Beliefs of Asian American and Non-Asian Students

Asian American students have outperformed their non-Asian counterparts on many of the commonly accepted indices of educational achievement (Hess, McDevitt, & Chih-Mei, 1987; Hirschman & Wong, 1986; Hsia, 1988; Park, 1990; Tsang & Wing, 1985). Although there is considerable agreement that ethnic differences in school performance exist (even after removing such factors as socioeconomic status (Ogbu, 1983, 1990) and ability (Steinberg, Dornbusch, & Brown, 1992)), there is little consensus amongst researchers regarding the causes of these differences. The major factors identified to explain differential academic performance include quantity of classroom instruction (Stevenson, Lee, & Stigler, 1986; Stigler & Stevenson, 1991), causal attributions (Hess et al., 1987; Holloway, 1988; Reglin & Adams, 1990; Stevenson et al., 1991; Weisz, Rothbaum & Blackburn, 1984; Yao, 1985), family structure (Shon & Ja, 1982; Park, 1990), perceived and actual institutional discrimination (Mickelson, 1990; Ogbu, 1978), socialization practices (Mordkowitz & Ginsburg, 1987), and ethnic differences regarding educational success (Sue & Okazaki, 1990).

Social cognitive models of achievement motivation (e.g., Eccles, 1983; Pintrich & Schrauben, 1992) have explored a broad range of social to personal factors to explain achievement differences. For example, Wigfield and Eccles (1992) incorporate three major components in their model: social world (social/cultural milieu), cognitive processes (perceptions and attributions), and motivational beliefs (task value and expectancy). They place greater emphasis on motivational beliefs by stating that "children's expectancies and values are assumed to have the most direct effect on their performance, persistence, and choice of achievement tasks" (Wigfield & Eccles, 1992, p. 279). These beliefs are relatively situational and domain specific. They are located in the later stages of their model. Accordingly, higher degrees of value and expectancies for success are positively related to all types of achievement behavior including task choice (Bandura, 1986; Eccles, 1983), effort expended (Dweck & Leggett, 1988), and use of cognitive strategies (Corno, 1989; Pintrich, 1987; Pressley, 1986).

Pintrich and colleagues (Pintrich, 1986, 1987, 1989; Pintrich & De Groot, 1990; Pintrich & Garcia, 1991; Pintrich, Roeser, & De Groot, 1992) conducted a series of correlational studies examining the relationship between motivational orientation, self-regulation learning, and

classroom academic performance with both junior high school and college students. Results indicated that the correlation between self-efficacy beliefs and cognitive engagement ranged from .44 to .50. Furthermore, a meta-analytic investigation of the relationship between self-efficacy beliefs and academic performance (Multon, Brown, & Lent, 1991) found a correlation of .38 or approximately 14% of the variance in students' academic performance. Students who have positive motivational beliefs (high self-efficacy) reported higher use of cognitive strategies, demonstrated more self-regulation, persisted more often in difficult or uninteresting academic tasks, engaged in deeper processing of material, and achieved higher levels of comprehension (Pintrich, 1987, 1989; Pintrich & De Groot, 1990; Pintrich & Garcia, 1991; Pintrich, Roeser, & De Groot, 1992; Schunk, 1990).

Research on the self-perceptions of competence among different ethnic groups indicate that such perceptions often are not linked to academic engagement and performance in the same way. For example, Stigler, Smith, and Mao (1985) found that Chinese children rated themselves significantly lower on three of the four sub-scales, cognitive, physical, and general self-esteem, than did their American counterparts, yet academically these children significantly outperformed the American students. Whang and Hancock (1994) found Asian-American students reporting significantly lower self-concepts for mathematics ability while reporting higher scores on standardized mathematics achievement tests. Surveys comparing Asian American and non-Asian Americans' attribution of academic success (Holloway, 1988; Reglin & Adams, 1990; Stevenson et al., 1991; Weisz et al., 1984; Yao, 1985) found Asians basing their academic success and failure primarily on effort over ability while non-Asians believed that their ability was the principal reason for their success. The higher achievement of Asian students may occur in part because they believe that all performance is linked to both an internal and controllable source, effort (Skinner, Wellborn, & Connell, 1990). This belief influences Asian parents' expectations of their children's academic achievement. Stevenson and colleagues (1991) found that American mothers placed lower academic expectations for their children and overrated their children's performance while Asian mothers reported higher academic expectations for their children but rated their children lower than American children in academic ability.

The pressure to please parents corresponds with Asian students demonstrating a greater fear of low academic performance than do their non-Asian counterparts. Asian parents' stress on

the importance of academic achievement combined with their belief in each child's potential to excel fosters academic success in Asian students. Steinberg, Dornbusch, and Brown (1992) found that parenting practices differ amongst ethnic groups and are mediated by culturally held beliefs about learning. Asian students scored the highest in having a strong fear that educational failure would produce negative consequences while they also were the most successful students academically. Higher levels of the fear of failure correlated with increasing levels of cumulative grade point average. This relationship proved to be the best predictor variable for academic performance in this study. The student's fear of failure combined with their belief in the importance of effort translated into Asians engaging in school longer by spending twice as much time each week on their homework as did their non-Asian counterparts (Steinberg et al., 1992).

Reglin and Adams (1990) found that Asian American students are more influenced by their parents' desire for them to do well than are their non-Asian counterparts. They concluded that Asian students' desire to meet their parents' academic expectations creates the need to spend more time on homework and to minimize the traditional activities of many high school students including dating, watching television, participating in athletic sports, and working. This research regarding Asian students' fear of the consequences of academic failure suggests that Asians focus less on their situational perception of capability to complete a task (self-efficacy) and more on the importance of excelling at the task (value). Therefore, the burden to meet both their parents' expectations and to avoid failure puts tremendous pressure on Asian students to achieve, which fosters academic excellence but leaves little room for underachievers (Kim, 1991).

When Asian students do not perceive they possess the personal capability to complete a required academic task (self-efficacy), the combination of their fear of the negative consequence of academic failure and their belief that long-term effort brings success allows them to persist and succeed even under extremely difficult academic challenges. Thus, it may not be the self-efficacy belief ("Can I do this task?") that best predicts academic success. Instead it may be the motivational beliefs ("I must do this task or else I will fail" or "If I work hard enough, I can do this task") that relate to academic success for Asian students. Therefore, Asian students' expectancy to achieve may not relate to success as much as their stronger feelings of pressure to achieve.

Cross-cultural research challenges Bandura's assumption (1986) that inaccurate appraisal of self-efficacy, in either direction, always has deleterious consequences. Research on Asians shows motivational beliefs are not located solely within the individual nor within the immediate context but rather are interdependent with the larger cultural and social context in which the individual's actions take place (Rueda & Moll, 1994). The contrasting inverse relationship of self-perceptions of ability and achievement for Asian students suggests that more research is needed on the nature of the differences in self-perceptions of ability of specific ethnic groups to evaluate the possible claim that different models of motivation are necessary for explaining the relationship between ethnic student's motivational beliefs and academic achievement.

The present investigation poses the following questions: 1) Do motivational beliefs have different relative importance for predicting the achievement motivation of Asian American and non-Asian students? 2) Do culturally influenced beliefs or self-efficacy beliefs better explain achievement motivation for Asian American and non-Asian students?

Method

Subjects

Two groups of ninth-graders participated in the investigation: 154 Asian Americans (most of whom had lived in the United States for more than seven years) and 372 non-Asians (primarily Caucasians), enrolled in twenty-one high school English classes from four schools located in upper to middle class areas from two suburban Los Angeles school districts. The Asian American students in this study identified themselves as Chinese (N=61), Vietnamese (N=41), Korean (N=33), and Japanese (N=15). Of this sample, 97 were born outside the United States, but had lived in the United States for more than seven years and 54 of them were born in the United States. According to the Orange County Department of Education's 1992 Racial and Ethnic Survey, these schools contained ninth-grade classes whose ethnic composition included over 20% Asian students. Of this sample, 99 were born outside the United States but had lived in the United States for more than seven years and 56 of them were born in the United States.

The high schools tracked students for English composition classes. The sample consisted of 377 regular students (283 non-Asian and 94 Asian) and 160 honor students (99 non-Asian and 60 Asian). The higher proportion of Asians (39%) compared to non-Asians (26%) in honors

classes reflects the higher proportion of Asians reported in all honors classes as reported by the four high schools.

Instrumentation

An important contribution of this study involved developing an instrument to assess different aspects of student beliefs about academic performance. Items were adapted from various published instruments used to assess student motivation, self-perceptions, and cultural beliefs (Connell, 1985; Eccles, 1983; Harter, 1981; Marsh, 1984; Meece, Blumenfeld & Hoyle, 1988; Nicholls, 1990; Pintrich & De Groot, 1990). The instrument was administered to one-hundred students in four separate pilot studies. Preliminary data analysis of pilot items involved reliability analysis for each derived scale indicating the internal consistency of the test. Items with low reliability were eliminated. The remaining items were revised to clarify ambiguities and assure proper test construction. The complete questionnaire was composed of 80 items related to demographic information (items 1-4); reading ability (items 5-24); motivational beliefs (items 25-45); self-efficacy beliefs (items 46-50); achievement behavior (items 51-70); and effort attributions (items 71-80). Each belief contained a statement and a 4-point Likert scale ranging from (1 = false to 4 = very true of me). The questionnaire was administered by the first researcher during students' regular classroom time with 40 minutes given for completion.

To obtain a general assessment of achievement behavior and to minimize the variance explained by verbal ability, a task was developed asking students to unscramble 20 words taken from two reading passages (adjusted to a sixth grade reading level) by locating the correct word in the passage. A reading task was selected in response to past research (i.e., Hess et al., 1987) which showed Asian students performing higher on mathematical assessments but equal to or slightly below their non-Asian counterparts on verbal tasks. This task was designed to measure key aspects of motivational behavior related to school performance using Maehr's (1984) indices of motivation: attention, persistence, activity level, continuing motivation, and performance. The average student spent 17 minutes attempting to complete the task. The score for this dependent variable was derived by computing the number correct.

Reading Ability. To obtain a general assessment of verbal ability, 20 word problems were utilized from the English Recognition Vocabulary Test developed by Seashore and Eckerson (1937). The original instrument consisted of 173 words listed in increasing difficulty.

Approximately every eighth word problem on the original test was included in the short verbal assessment, with slight modification made for those words that were archaic, to form a battery of 20 word problems. These word problems were listed in increasing difficulty allowing the student to be aware of the increasing level of task demand. For each problem, students were told to choose the word that is a synonym of or is related to the key word from four available choices. The key words included such words as adhesive, quagmire, decorum, and panegyry. The purpose was to obtain a brief standardized verbal assessment that would show the effects of verbal ability upon completing the task (20 items; coefficient alpha = .70). This measure was scored by summing the number of incorrect responses and subtracting the number from 20.

View of Ability. Students' concepts of the learning process were assessed on a 4-point Likert-scale (1 = false, 2 = mostly false, 3 = mostly true, and 4 = very true of me) to determine the degree they believed that intelligence is like a skill that can be increased through practice. These items were negatively worded then recoded for high scores to indicate a belief that ability is not fixed but mediated by effort (e.g., "Some people are born good learners. Others are just stuck with their limited ability"). Negative correlations indicated a disagreement with the statement, demonstrating an incremental view of ability (six items; coefficient alpha = .60 in this sample).

Fear of Academic Failure. Students' perceived fear was assessed on a 4-point Likert-scale (1 = false to 4 = very true of me). These items indicated the extent to which students feared that educational failure would produce parental disapproval or negative consequences for future employment (e.g., "It is unlikely that a good job can follow a bad education."). This construct overlaps conceptually with ego or performance orientation (e.g. Ames & Archer, 1988). High scores indicated greater fear of failure (six items, coefficient alpha = . 68 in this sample).

Self-Efficacy Beliefs. Student perceptions of how successful they would be in unscrambling the twenty words from the two reading passages (e.g., "Compared to other students in this class, I expect to do well on this quiz.") were assessed on a 4-point Likert-scale (1 = false to 4 = very true of me). Following Schunk and Hanson (1985) and Bandura's (1986) recommendations that 1) self-efficacy needs to be measured according to a specific task and 2) the sample of problems given needs to represent increasing task difficulty to insure proper self-assessment, the self-efficacy portion of the questionnaire provided six sample questions (low to medium high difficulty level) for students to predict their success on the task they were about to

complete. Furthermore, information about the nature of the task was given verbally to the entire class to provide students with accurate information on task difficulty. Students were told that all the answers were given in the reading passage and that they could use any method they desired to complete the task. High scores indicated higher levels of self-efficacy (six items; coefficient alpha = .78 in this sample).

Effort Attribution. Students' attributions for their performance on the motivational task were assessed by giving a summary score for the number of effort attribution responses chosen utilizing a questionnaire by Ryan and Connell (1989). A sample item follows: "If you did well on the 20 scrambled word problems, it would be because..." High scores indicated a tendency to choose the attribution of effort over other causal attributions (eight items; coefficient alpha = .68 in this sample).

Cultural Identity. Students identified their ethnicity from the following five possible choices: Asian, Asian American, Mexican American, African American, and Caucasian/Other. These choices were then collapsed into two groups making it a dichotomous variable (Asian, Asian American = 1 and non-Asian, all other choices = 2).

English Class. Students were classified by English classes (Regular = 1, Honors = 2).

Parent's Level of Education. To control for the impact of socioeconomic status, students identified their father and mother's level of education from the following five choices (1 = less than high school, 2 = high school diploma, 3 = some college, 4 = college degree, 5 = graduate degree). The scores on both the items were summed and then divided by two to obtain an overall average and to control for one parent families (2 items, coefficient alpha = .78).

Years in the United States. To control for degree of acculturation, students identified how many years they had lived in the United States from the following five choices (1 = less than 2 years, 2 = 2-3 years, 3 = 4-6 years, 4 = 7 or more years, 5 = Born in the United States). Reliabilities lower than .60 were removed from the study due to their unacceptable level of internal consistency. This included removing four questions regarding the use of peer support.

Results

Table 1 shows the ranges, means and standard deviations for all measured variables. The variance was satisfactory, revealing significant variability in the present sample.

Insert Table 1 about here

Comparison Between Groups

It was necessary to test whether significant differences exist in achievement and reading ability between Asian and non-Asian students (see Table 2). An achievement difference was found through an independent group t-test with Asian American students ($M = 18.04$) demonstrating higher levels than their non-Asian counterparts ($M = 14.88$), $t(452.77) = 9.39$, $p < 001$. This difference cannot be explained by their reading ability as Asian American students ($M = 8.82$) scored near identical averages to non-Asian student scores ($M = 8.62$), $t(249.59) = .55$, $p > .05$. The Asian American students' parents completed more education ($M = 3.67$) than did their non-Asian counterparts ($M = 6.80$), $t(240.84) = 2.19$, $= p < .05$, with 44% Asian American and 29% non-Asian fathers completing graduate school. One of the major criticisms of cross-cultural research involves the confounding effects of SES with ethnicity. This has most often happened when upper-middle class students are compared with lower-class students, suggesting that researchers do not take into account the multiple roles students represent as a function of their membership in a group. A follow-up partial correlation was conducted controlling for the effects of SES (parental education). Results indicated no significant differences in correlations were found when the effects of SES were partialed out. Finally, in contrast to previous literature, Asian students did not attribute effort beliefs ($M = 4.15$) significantly more than their non-Asian counterparts did ($M = 4.01$), $t(315.36) = .75$, $p > .05$.

Two follow-up t-tests were performed controlling for the differences in English class enrollment. In the honors classes Asian Americans scored higher on the achievement task ($M = 18.84$) than did non-Asians ($M = 17.33$), $t(105.01) = 3.27$, $p < .001$. In the regular level English classes, Asian Americans also scored higher on the achievement behavior task ($M = 17.46$) than did non-Asians ($M = 14.28$), $t(206.07) = 7.04$, $p < .001$. Asian American honor students reported

higher levels of fear of academic failure (M = 3.18) than non-Asian students (M = 2.72), t(135.45) = 5.01, $p < .001$, and in regular classes, Asian Americans reported higher levels of fear of failure (M = 3.09) than did non-Asians (M = 2.63), t(145.75) = 4.88, $p < .001$.

Regarding self-efficacy beliefs, non-Asian students appeared more confident with their abilities to accomplish the verbal tasks by reporting higher levels of self-efficacy beliefs (M = 3.02) than did their Asian American counterparts (M = 2.90), t(287.28) = 2.25, = $p < .05$. However, Asian American students outperformed their non-Asian counterparts by scoring approximately 90% on the assessment whereas the non-Asian students scored approximately 75%.

Insert Table 2 about here

Correlations and Regressions

The zero-order intercorrelations for all nine variables investigated in this study are presented for Asian American students in Table 3 and for non-Asian students in Table 4. Given that these correlations were in the low range, it was believed that they did not present a problem of multicollinearity in the analysis. For Asian Americans, fear of academic failure, self-efficacy, reading ability, and incremental view of ability significantly correlated with achievement motivation scores. Table 3 (Asians) showed that English class level, social economic status (parent's level of education) and years in the United States averaged less than r = .05. In contrast, Table 4 (non-Asians) showed all variables significantly correlated with achievement motivation except for fear of academic failure. It is important to note that demographic variables, especially English class level, predicted non-Asian achievement scores (r = .27) more than for Asian achievement scores.

Insert Tables 3 and 4 about here

Multiple Regressions

Once the difference between Asian American and non-Asian students' achievement behavior was established, multiple regression equations were used to investigate the importance

of the four motivational beliefs in predicting achievement behavior by computing four separate regression models for Asian American and non-Asian students. Asian students' fear of academic failure (R = .341), $F(1, 150) = 19.72$, $p = .001$, $MSE = 9.25$ and self-efficacy (R = .271), $F(1, 151) = 12.01$, $p = .001$, $MSE = 9.66$ significantly correlated with the dependent variables. Non-Asians showed effort attribution (R = .290), $F(1, 339) = 31.06$, $p = .001$, $MSE = 20.38$, entity view of ability (R = .255), $F(1, 362) = 25.17$, $p = .001$, $MSE = 21.21$, and self-efficacy (R = .150), $F(1, 362) = .8.33$, $p = .001$, $MSE = 22.18$ significantly explained achievement motivation. Only fear of academic failure was an insignificant predictor for non-Asian students.

A follow-up multiple regression model was calculated utilizing the forward blockwise approach to compute separate equations for Asian and non-Asian students to explain whether the predictive values of these constructs differed significantly between Asian and non-Asian students. For Asian students, fear of academic failure (R = .338), $F(1,148) = 19.00$, $p = .001$, $MSE = 20.34$, and self-efficacy beliefs (R = .417), $F(2, 147) = 15.47$, $p = .001$, $MSE = 8.77$, were the only variables that made a significant marginal contribution. For non-Asian students, effort attributions (R = .292), $F(1, 338) = 31.47$, $p = .001$, $MSE = 20.34$, incremental view of ability (R = .360), $F(2, 337) = 24.98$, $p = .001$, $MSE = 19.42$, and efficacy beliefs (R= .376), $F(3, 336) = 18.46$, $p = .001$, $MSE = 19.20$ contributed significantly. Only fear of academic failure did not contribute significantly to the model for non-Asian students, but this construct explained the most variance for Asian students' achievement motivation.

Discussion

The first question of the investigation was to determine whether motivational beliefs have different relative importance for predicting the achievement motivation of Asian American and non-Asian students. The data from this study indicate that Asian American and non-Asian students differ in type of beliefs which may help to explain their achievement behavior. For Asian American students, fear of the negative consequence of academic failure best explained their achievement behavior but least explained non-Asian students' achievement behavior. Ethnographic research (e.g., McCunn, 1988) substantiates that much of Asian American parental acceptance of their children is contingent upon academic success (Siu, 1992). Low academic performance elicits criticism and sometimes shame upon the entire family (Alwin, 1989). This

explicit parental pressure provides much of the impetus for academic success in Asian American students.

In contrast, effort beliefs and incremental view of ability best explained achievement behavior in non-Asian students whereas fear of academic failure least explained their achievement behavior. The importance of effort for non-Asian students differs from previous research (see Stevenson et al., 1991) due to the nature of the motivational task naturally elicited effort attributions and the questions regarding effort were task specific and not global measures of attributions. Weiner (1979, 1983, 1992) argues that though attributional beliefs seem to be relatively stable, individuals make attributional judgments based primarily on the basis of the current achievement situation. He emphasizes the importance of the immediate context which affects students' perceptions and refers to past experiences as only one of the factors utilized when making attributional judgments. Consequently, students may have selected the attributional cause of effort over other causes because of the task demands. As a result, there was a restriction of range causing inconsistent results with past research. This hypothesis is supported by effort beliefs having the smallest standard deviation of all measured variables. As predicted by previous research, self-efficacy beliefs were significant secondary predictors for each group

The second research question focused on determining whether culturally influenced beliefs or self-efficacy beliefs better explain achievement motivation for Asian American and non-Asian students. Though much research supports the importance of self-efficacy as a predictor of achievement behavior, no known studies have compared this variable with other culturally sensitive variables upon Asian-American students to determine the relative importance of each belief in predicting achievement behavior. This study found Asian American students reporting significantly lower levels of situational self-efficacy beliefs than did their non-Asian counterparts. However, Asian students outperformed non-Asian students on the achievement task. The cultural belief, fear of academic failure, better explained achievement motivation for Asian Americans than did self-efficacy beliefs. These differences could be due to a number of factors: Asian American students may be setting higher goals for themselves or evaluating their performance against more stringent criteria. Consequently, they work harder to reach their goals. On the other hand, non-Asians may not be realistically evaluating their performance. If non-Asians evaluate their performance according to their peers who are not doing any better than they are or according to

their parents' lower expectations, then they assume they are excelling. Stevenson and colleagues (1990) argue that parent's lower expectations and overestimation of their children's abilities work against high academic achievement for non-Asian students. If parents believe their children are doing well and communicate this message to their children, the students find no purpose for studying harder. In contrast, Asian American students perceive their parents to be critical of their school performance causing them to evaluate their abilities more negatively than non-Asian students.

An alternate interpretation for the higher scores of Asian students involves a difference not in motivational behavior but in their willingness to comply to adult authority (teacher or researcher) or to school demands due to the authoritarian parenting style of Asian parents. Even if this alternative hypothesis partially explains their higher scores, it can be inferred that their acquiescence influences them to complete more of their homework, listen more to class instruction, and receive more positive feedback from instructors, all behaviors which positively relate to school performance.

An important issue to consider is that theories of achievement motivation developed in Western countries are rooted in individualism and stress personal choice and responsibility. In contrast, Stigler, Smith, and Mao (1985) suggest that Asians' motivational beliefs are not solely located within the individual nor within the immediate context, but they are interdependent with the larger cultural and social context in which the individual's actions take place. Asians are socialized to feel a sense of obligation to their family or larger community whose needs and expectations prevail over individual desires. This orientation is translated through modesty and self-effacement, leading them to downplay their perception of their own academic performance. While children in the United States learn to "stand out," to make one's individuality salient, Asians learn to "stand in," to become so identified with the group that one's individuality is not noticed (Weisz, Rothbaum & Blackburn, 1984). Perhaps Asians view efficacy to be more on a familial or group level, allowing one to focus not on whether one has the personal efficacy to complete a task but more on the shared sense of responsibility to achieve, enabling one to succeed even with lower perceptions of ability (Weisz, Rothbaum & Blackburn, 1984). Finally, the data in this investigation indicates more attention should be given to how motivational beliefs elicit different responses in different cultural/ethnic groups.

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Table 1

Descriptive Statistics for All Participants

Variables	Range	M	SD
Assessments			
Achievement Behavior	0-20.00	15.90	4.51
Reading Ability	0-17.00	8.70	2.98
Motivational Beliefs			
Incremental View of Ability	1-4.00	2.08	.52
Fear of Academic Failure	1-4.00	3.09	.51
Self-Efficacy Beliefs	1-4.00	2.98	.70
Effort Beliefs	1-7.00	4.05	.28
Demographics			
Asian /non-Asian	1-2.00	1.70	.46
Regular/Honor Class	1-2.00	1.27	.44
Parent's Education	1-5.00	3.51	1.14
Years in U.S.	1-5.00	4.70	.73

Note. $N = 483$ students. Grade 9. Scores for motivational and self-efficacy beliefs ranged from 1 = (false) to 4 = (very true); scores for Asian = 1, non-Asian = 2; Regular =1, Honor's Class= 2; scores on parent's education ranged from 1= (less than high school diploma) to 5= (graduate degree); scores on years in U. S. ranged from 1= (less than 2 years) to 5 = (born in the U.S.).

Table 2

T-Test for Differences in Means by Culture

Variables	Asian	SD	Non-Asian	SD
Assessments				
Achievement Behavior	18.04**	2.79	14.88	4.75
Reading Ability	8.82	3.20	8.60	2.85
Motivational Beliefs				
Incremental View of Ability	2.07	.51	2.09	.54
Fear of Academic Failure	3.29**	.46	3.01	.51
Self-Efficacy Beliefs	2.90	.52	3.02*	.62
Effort Beliefs	4.15	.26	4.01	.30
Demographics				
Parent's Education	3.67**	1.25	3.40	.54
Years in U.S.	4.23	.91	4.90**	.55

Note. N = 150 Asian students and 333 Non-Asian students; Grade 9. Scores for items epistemological through efficacy ranged from 1 = (false) to 4 = (very true); scores on parent's education ranged from 1= (less than high school diploma) to 5 = (graduate degree); scores on years in U.S. ranged from 1= (less than 2 years) to 5 = (born in the U.S.).

*p < .05. **p <. .001.

Table 3
Intercorrelations of Measured Variables for All Asians-Americans

Variables	1	2	3	4	5	6	7	8	9
Assessments									
1. Achievement Behavior	—	.15*	. 11*	.34*	.28*	.12	.09	.04	.01
2. Reading Ability		—	.-10	-.08	.30*	.17*	.23*	.23*	.34*
Motivational Beliefs									
3. Incremental View of Ability			---	.01	.05	-.09	.05	-.06	-.11
4. Fear of Academic Failure				—	-.11	.10	.-02	-.02	-.09
5. Self-Efficacy Beliefs					--	.11	.04	.22*	.04
6. Effort Beliefs						--	.05	.12	.08
Demographic									
7. Honors/Regular Class							—	.25*	.09
8. Parent's Education								—	.04
9. Years in U.S.									—

Note. $N = 333$; Grade 9. Coefficients greater than .23 are significant at the .001 level and greater than .14 at the .05 level.

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Table 4
Intercorrelations of Measured Variables for All Non-Asians

Variables	1	2	3	4	5	6	7	8	9
Assessments									
1. Achievement Behavior	—	.25*	-.25*	.08	.15*	.29*	.27*	.14*	.16*
2. Reading Ability		—	-.24*	-.04	-.17*	.19*	.38*	.17*	.14*
Motivational Beliefs									
3. Incremental View of Ability			—	-.06	-.10*	-.26*	.05	.11*	-.04
4. Fear of Academic Failure				—	.19*	.10	.01	.05	.05
5. Self-Efficacy Beliefs					—	.30*	.01	.06	.01
6. Effort Beliefs						—	.01	.12	.09
Demographic									
7. Honors/Regular Class							—	.25*	.09
8. Parent's Education								—	-.03
9. Years in U.S.									—

Note. N =154; Grade 9. Coefficients greater than .16 are significant at the .001level and greater than .11 at the .05 level.

Table 5

Multiple Regressions By Cultural Groups

	Asian					Non-Asian				
Variables	*R*	β	*SE*	*B*	*p*=	*R*	β	*SE*	*B*	*p*=
Incremental View of Ability	.100	.134	.100	.102	.1776	-.250	-.365	.092	-208	.0001**
Fear of Academic Failure	.338	.292	.074	.300	. 0001**	.075	.076	.067	.058	.2635
Self-Efficacy Beliefs	.280	.299	.092	.246	.0013**	.150	.176	.093	.102	.0498*
Effort Beliefs	.116	168	.134	.095	.2110	.290	.498	.119	.221	.0001**

Note. *N* = 150 Asian students and 333 Non-Asian students; Grade 9.
*p < .05. **p < .001.